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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/391,399	09/08/1999	HITOSHI YAMAGATA	3553-2	8545

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EXAMINER

FETZNER, TIFFANY A

ART UNIT	PAPER NUMBER
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2862

DATE MAILED: 06/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/391,399

Applicant(s)
Hitoshi Yamagata

Examiner
Tiffany A. Fetzner

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2862



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Apr 23, 2002

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-12 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-12 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

6) ☐ Other:

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DETAILED Non-Final ACTION

1. The September 27th 2001 Response is considered free of new matter by the examiner.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Arguments

4. Applicant's arguments filed April 23rd 2002 have been fully considered but they are not persuasive, because new grounds of rejection that meets applicant's **claims 1-7, amended claim 11, and claims 8-10, 12** which were added with the May 10th 2001 amendment, are applied in this non-final action.

Claim Rejections

- 5.
6. The rejections of **claims 1, 3-5** under **35 U.S.C. 103(a)** as being unpatentable over **Kaufman** US patent 4,829,252 issued May 9th 1989; in view of **Takekoshi et al.**, US patent 6,049,208 issued April 11th 2000 filed November 17th 1995; from the February 13th 2001 Office Action are **rescinded**.

7. The rejections of **Claims 2, 6, and 7** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Kaufman** US patent 4,829,252 issued May 9th 1989; in view of **Takekoshi et al.**, US patent 6,049,208 issued April 11th 2000 filed November 17th 1995; in further view of **Kan et al.**, US patent 6,094,590 issued July 25th 2000 filed September 18th 1997, from the February 13th 2001 Office Action are **rescinded**.

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8. The rejections of **Claims 1-12** under **35 U.S.C. 102(e)** and **35 U.S.C. 102(a)** as anticipated by **Wilk** US patent 5,899, 857 issued May 4th 1999 filed January 7th 1997; from the June 27th 2001 Office Action are **rescinded**.

9. The rejections of **Claims 1-12** under **35 U.S.C. 103(a)** as obvious over **Wilk** US patent 5,899, 857 issued May 4th 1999 in view of **Acker et al.**, US patent 6,128,522 issued October 3rd 2000 and filed May 22nd 1998; from the June 27th 2001 Office Action are **rescinded**.

10. The rejections of **Claims 1-4**, and **6-10** under **35 U.S.C. 102(e)** and **35 U.S.C. 102(a)** as anticipated by **Meaney et al.**, US patent 5,924,987 issued July 20th 1999 filed October 6th 1997; from the December 13th 2001 Office Action are **rescinded**.

11. The rejections of **Claims 1-4**, and **6-10** under **U.S.C. 103(a)** as obvious over **Meaney et al.**, US patent 5,924,987 issued July 20th 1999 filed October 6th 1997; in view of **Kaufman** US patent 4,829,252 issued May 9th 1989; from the December 13th 2001 Office Action are **rescinded**.

12. The rejection of **Claim 5** under **35 U.S.C. 102(e)** and **35 U.S.C. 102(a)** as anticipated by **Meaney et al.**, US patent 924,987 issued July 20th 1999 filed October 6th 1997; from the December 13th 2001 Office Action are **rescinded**.

13. The rejection of **Claim 5** under **35 U.S.C. 103(a)** as obvious over **Meaney et al.**, US patent 924,987 issued July 20th 1999 filed October 6th 1997; in view of **Kaufman** US patent 4,829,252 issued May 9th 1989; and in further view of **Takekoshi et al.**, US patent 6,049,208 issued April 11th 2000 filed November 17th 1995; from the December 13th 2001 Office Action are **rescinded**.

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14. The rejections of **Claims 11 and 12** under **35 U.S.C. 102(e)** and **35 U.S.C. 102(a)** as anticipated by **Meaney et al.**, US patent 924,987 issued July 20th 1999 filed October 6th 1997; from the December 13th 2001 Office Action are **rescinded**.

15. The rejections of **Claims 11 and 12** under **35 U.S.C. 103(a)** as obvious over **Meaney et al.**, US patent 924,987 issued July 20th 1999 filed October 6th 1997; in view of **Kaufman** US patent 4,829,252 issued May 9th 1989; and in further view of **Acker et al.**, US patent 6,128,522 issued October 3rd 2000 and filed May 22nd 1998; from the December 13th 2001 Office Action are **rescinded**.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

17. **Claims 1-5**, are rejected under **35 U.S.C. 102(e)** as anticipated by **Green** US patent 6,198,957 B1 issued March 6th 2001 filed December 19th 1997;

18. With respect to (Amended) **Claim 1**, **Green** teaches “a patient couch, (i.e. patient carrying bed 128 shown in Figures 2 through 9) which enables movement of the patient” [See col. 3 lines 38-39; col. 7 lines 6-17; col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 14 lines 1-15];**Green** teaches “a position information establishing apparatus which provides 3-dimensional position information of the region of interest of the patient” [See col. 8 line 54

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through col. 9 line 21; col. 5 line 50 through col. 6 line 4; col. 2 line 68 through col. 3 line 4 which teach 3-dimensionality specifically]; **Green** also teaches and a patient couch controller (i.e. couch position controller component 64 Figures 1) “for moving the patient couch, based on the provided position information” [See col. 7 lines 6-17; col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68;].

19. **Green** teaches and / or suggests that “the region of interest is re-positioned in 3-dimensions” because **Green** teaches an apparatus that enables a radio-therapy beam to be precisely positioned on a region desired to be treated. [See col.2 lines 44-46;] and an automatic feedback system which controls the couch position, in response to the location information provided by an operator, or computer, of the desired area to be treated, is used to continually image the tumor or treatment area in real time. [See col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17].

20. The **Green** reference teaches and suggests that, the locations at which a patient is repositioned in three-dimensions may comprise locations that are “substantially either at the center of the static magnetic field” (i.e. the isocenter) or at the center of the gradient magnetic field.” [See col. 1 lines 31-37; and col. 9 lines 34-40 where **Green** teaches that the x' , y' and z' coordinate axes of the gradient coils are different from the x' , y' , and z' axes of the patient couch.] This teaching suggests that the center of the gradient magnetic fields produced do not always correspond to the magnetic isocenter. Additionally, the patient couch positioning controller moves the couch in the x , y , and z directions based on the desired area to be treated. [See col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17] therefore, the

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ability to position the patient relative to either the center of the gradient field, or the magnetic isocenter whose x, y, and z axes correspond to the x, y, z axes of the patient couch is taught, and or suggested by the **Green** reference.

21. The **Green** reference teaches, shows, and suggests, using a magnetic resonance imaging system with an RF imaging coil. [See figure 1, coil 42, receiver 46, gradient coils 50; col. 3 lines 18-40] The **Green** reference also teaches, shows, and suggests, “a static magnetic field generator for generating a static field; a gradient magnetic field generator for generating a gradient magnetic field that is superimposed on the static magnetic field;” [See col. 7 lines 22-65] “a radio-frequency magnetic field pulse transmitting/receiving unit, which applies a radio frequency pulse to a region of interest of a patient that is located within the static magnetic field, and which also receives a magnetic resonance signal that is generated from the patient;” [See Figure 1 components 42, 44 and 46].

22. With respect to (Once Amended) **Claim 2**, **Green** teaches and suggests that “the position information establishing apparatus accepts input position information based on an image of the patient that is obtained from the magnetic resonance signal.” [See col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2**.

23. With respect to (Once Amended) **Claim 3**, **Green** teaches “the position information establishing apparatus comprises a position detection apparatus that detects the position of the region of interest.” [See col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-

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17; controller component 24 in Figure 1] The same reasons for rejection, that apply to **claim 1** also apply to **claim 3**.

24. With respect to (Once Amended) **Claim 4**, **Green** suggests “the patient couch controller” (i.e. couch controller 64) “performs an initial approximate positioning of the patient couch, based on a signal from the position detection apparatus”, because the apparatus of **Green** enables a real-time three-dimensional between the shape, position, and intensity of the volume and location of the region to be treated and imaged by the MR device, while the position of the patient, and subsequently the tissue examined is moved, based on a signals from controller 24, selector 60, synchronizer 62 and couch position controller 64. [See col. 9 lines 1-21, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17; and controller components 24, 60, 62, 64 in Figure 1]

Additionally, **Green** teaches and suggests correlating previously gathered and therefore known three-dimensional data of the tissue that is being imaged and treated, with the data being obtained in real time, which suggests that at least one initial reference positioning of the patient upon the patient couch is performed. The controlling of the treated area, so that it is not incident on abutting tissue, also suggests that the patient couch which controls the location of the patient and area of tissue that is being treated and imaged is re-positioned as needed throughout the duration of the real-time imaging. [See col. 5 line 34 through col. 6 line 4] The same reasons for rejection, that apply to **claims 1**, and **3** also apply to **claim 4**.

25. With respect to (Amended) **Claim 5**, **Green**, teaches “the patient couch (i.e. component 128) is capable of moving the patient horizontally and vertically. [See col. 7 lines 11-17; col. 10 lines 60-68]. The same reasons for rejection, that apply to **claim 1** also apply to **claim 5**.

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26. ***Claim Rejections - 35 USC § 103***

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

28. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

29. **Claims 6-9** are rejected under **35 U.S.C. 103(a)** as obvious over **Green** US patent

6,198,957 B1 issued March 6th 2001 filed December 19th 1997;

30. With respect to (Amended) **Claim 6**, **Green**, teaches, suggests and shows “A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch that is disposed within a static magnetic field and a gradient magnetic field”; [See Figures 2, 3, 4, 5, 6, 8, 11 col. 7 lines 1-30] **Green**, teaches, and suggests “moving the patient couch based on a signal from a position detector so that a region of interest of the patient approximately coincides with the center of k-space” (i.e. the examiner considers the center of k-

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space to suggest either the static magnetic field or the center of the gradient magnetic field,” [See col. 1 lines 32-37, col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17; col. 14 lines 1-15]

31. Green, teaches, and suggests “applying a radio-frequency pulse to the region of interest of the patient, and receiving a signal that is generated from the patient,” [See col. 4 line 65 through col. 5 line 22] “reconstructing a plurality of images of the patient, based on the signal received” is taught and suggested by the teachings of col. 8 line 7 through col. 9 line 21. The examiner interprets real time imaging to broadly suggest “reconstructing a plurality of images of the patient” because in real-time imaging the reconstructed image is continuously generated, or updated, so numerous images are implicitly produced. **Green,** teaches, and suggests “selecting an image that includes the region of interest from the plurality of images of the patient [See col. 5 line 59 through col. 6 line 4, where a previously obtained three-dimensional image of the target region is used as a reference , to ensure that abutting tissue is not irradiated, and that only the target tissue is being imaged.]

32. Green, lacks directly teaching that “the region of interest of the patient substantially coincides in 3-dimensions with the center of kspace” However, the **Green,** reference does suggest “moving the patient couch, based on the selected image, so that the region of interest of the patient substantially coincides in 3-dimensions with the center of kspace” because in the MRI / NMR art the center of k-space corresponds to the low spatial frequencies of the acquired image data, (the examiner notes that page 4 paragraph 3 lines 5 of the April 23rd 2002 response also state that “the center of k-space simply corresponds to lower spatial frequencies of the image

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data”, and **Green**, teaches that the magnetic field derived from the excitation coils is relatively low, sufficient to provide only the minimum necessary spatial resolution and sensitivity to determine if the desired area is being treated and imaged; [See col. 3 lines 57-68] Therefore, **Green** teaches the desirability of locating the target area with low frequency image data and it would have been obvious to one of ordinary skill in the art, at the time that the invention was made, that since low-frequency image data is obtained at the center of k-space; and the target area is imaged in three-dimensions with a low frequency magnetic field, that the limitation of locating the target, by moving the patient couch in three dimensional space to coincide with the center of k-space is suggested from the reference. [See col. 1 lines 33-37; col. 3 lines 57-68, col. 9 lines 1-11, col. 10 lines 13-26; col. 10 lines 60-68; col. 7 lines 6-17; col. 14 lines 1-15 and the rejection reasons given for the rejection of **claim 1**.] The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 6**.

33. With respect to (Amended) **Claim 7**, **Green** teaches, and suggests “designating the region of interest within the selected image.” [See col. 7 lines 22-31; col. 8 line 63 through col. 9 line 21; col. 5 line 43 through col. 6 line 4] The same reasons for rejection, and obviousness, that apply to **claim 6** also apply to **claim 7**.

34. With respect to **Claim 8**, **Green** teaches, “A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch (i.e. couch 128) that is disposed within a static magnetic field and a gradient magnetic field”; [See Figure 1, col. 7 line 1 through col. 9 line 57] **Green** also teaches, designating a 3-dimensional position of a region of interest of the patient; [See col. 7 lines 22-31; col. 8 line 63 through col. 9 line 21], and

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moving the patient couch, so that the region of interest of the patient substantially coincides 3-dimensionally with the center of k-space. (The examiner interprets the center of k-space as suggesting the center of the static magnetic field or the center of the gradient magnetic field.”) [See the rejection reasons given for the rejection of **claim 6**, which need not be reiterated.] The same reasons for rejection, and obviousness, that apply to **claims 1, 6** also apply to **claim 8**.

35. With respect to **Claim 9**, this claim just restates the additional limitations of **claims 6** and **7** which have already been addressed in this **action**. **Green** teaches the limitations of claim 9, for the same reasons already given in the rejections of **claims 1, 6**, and **7** which need not be reiterated. Therefore, The same reasons for rejection, and obviousness, that apply to **claims 1, 6, 7, 8** also apply to **claim 9**.

36. **Claims 10-12** are rejected under 35 U.S.C. 103(a) as obvious over **Green** US patent 6,198,957 B1 issued March 6th 2001 filed December 19th 1997; in view of **Wilk** US patent 5,899,857 issued May 4th 1999, filed January 7th 1997.

37. With respect to **Claim 10**, **Green** lacks directly teaching the step of “obtaining positional information from a position sensor representing a 3 dimensional position for the region of interest”, However, **Wilk** teaches “obtaining positional information from a position sensor (i.e. detector 70) representing a 3 dimensional position for the region of interest.” [See col. 7 lines 10-21] It would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the teachings of the **Wilk** reference can be combined with the teachings of **Green** because **Green** teaches that the information concerning the location of the desired area to be treated and imaged is derived automatically by a computer, and the position of the patient and the

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treatment couch is controlled by an arbitrary automatic feedback system, which tracks the desired area of interest. [See col. 9 lines 1-21] The automatic feedback control of **Green** suggests that some type of position detection is occurring, and that the patient couch is moved in conjunction with that feedback signal. **Wilk** teaches a medical treatment system, for obtaining three-dimensional data that is also continually updated, [See **Wilk** abstract] is useful in magnetic resonance devices, [See **Wilk** col. 1 lines 14-15], repositions the patient support, [See **Wilk** col 7 lines 9-21] and contains wireless signal emitters 68 which are optionally attached to support 12 for providing computer 28 with reference points for use by target tracking module 50. Detectors 70 sense the spatial position signals produced by the emitters 68 and provide that information to tracking module 50. [See **Wilk** col 7 lines 9-21] The examiner considers the automatic positional feedback system of **Green** to be a system similar to the system of **Wilk**, and since both references are fundamentally using an MR device, with a patient couch controller, producing three-dimensional images, and continuously updating and / or repositioning the patient couch to keep the target area imaged, substituting the detector configuration of **Wilk** for the automatic system of **Green** would have been obvious to one of ordinary skill in the art, at the time that the invention was made.

38. Additionally, **Green** teaches that the use of positional fiducial markers are well known from the prior art. [See col. 2 lines 12-15 where positional information from a fiducial marker, inserted into the patient in the tumor containing region of interest, has been used in past systems.] Therefore, it would have been obvious to one of ordinary skill in the art, at the time that the invention was made, that modifying the instant invention to include positional information from

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fiducial markers, or the positional detectors of **Wilk** is within the scope of the **Green** reference.

The same reasons for rejection, and obviousness, that apply to **claims 1, 8, 9** also apply to **claim 10**.

39. With respect to **Amended Claim 11**, **Green** teaches and suggests “A method for three-dimensionally positioning a patient region of interest substantially as an optimum MR imaging position for diagnostic imaging within an MRI system” [See col. 2 line 43 through col. 3 line 9,] **Green** teaches and suggests a method comprising: positioning a patient region of interest at a first position within an MRI field of view; generating MR images of the patient in three dimensions while located at said first position” [See col. 5 line 43 through col. 6 line 4; col. 7 lines 11-16; col. 3 lines 63-68] “using a first high speed positioning scan MRI data acquisition pulse sequence; [See col 3 lines 18-41] “locating and designating the patient region of interest position within said images;” [See col. 8 lines 54-68] “generating 3-dimensional position difference data between the designated position of the patient region of interest in the images and an optimum MR imaging position;” [See col. 5 lines 43 through col. 6 line 4] “automatically re-positioning the patient region of interest in 3-dimensions from said first, now designated, position to an optimum MR imaging position using said position difference data and generating diagnostic MRI data” [See col. 9 lines 1-21, col. 10 lines 12-31, col. 10 lines 60-68]. The step of “using a second diagnostic MRI data acquisition pulse sequence, different than said first sequence, to provide diagnostic images having improved precision and quality with reduced image distortion, non-uniformities and fat, after the patient is re-positioned to said optimum MR imaging position” is suggested from col. 8 lines 18-42 where the imaging sequence used is taught to be dependent

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upon the affect upon the t1 and t2 parameters, and it is suggested that each time an imaging scan is performed that the appropriate pulse sequence which enables spatial resolution, increases sensitivity and improves accuracy be used. Additionally, **Wilk** teaches a second pulse sequence that is different from a first pulse sequence after re-positioning because sequences executed at different frequencies are taught. [See abstract, col. 7 lines 9-21, col. 7 lines 38-39; col. 3 line 68 through col. 4 line 16]. The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6, 8, 10**, also apply to **claim 11**.

40. With respect to **Claim 12**, **Green** suggest "position data provided by a position sensor" (i.e. the automatic feedback system taught in col. 9 lines 1-11, col. 10 lines 13-27); "that automatically senses a relative spatial position between a movable patient and a fixed MRI system." [See the rejection of claim 10, col. 10 lines 60-68]. Additionally, **Wilk** teaches this limitation. [See col. 7 lines 9-21, Figure 1, the abstract] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6, 8, 10, 11**, also apply to **claim 12**.

41. Prior Art made of Record

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) US patent 6,112,110 issued to **Wilk**, August 29th 2000 and filed February 12th 1999. The examiner notes that **Wilk** 6,112,110 is a divisional to the **Wilk** 5,899,857 applied in this office action and that the disclosure is substantially identical although the claims are different. Therefore,

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under **35 USC 102 (e)** the **Wilk** 6,112,110 is applicable to all the claims, because it teaches the same features.

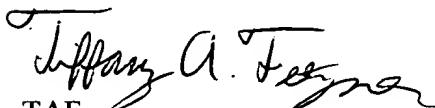
- B)** US patent 4,968,937 issued to **Akgun** November 6th 1990.
- C)** US patent 5,735,278 issued to **Hoult et al.**, April 7th 1998 and filed March 15th 1996.
- D)** US patent 924,987 issued to **Meaney et al.**, July 20th 1999 filed October 6th 1997;
- E)** US patent 4,829,252 issued to **Kaufman** May 9th 1989;
- F)** US patent 6,128,522 issued to **Acker et al.**, October 3rd 2000 and filed May 22nd 1998;
- G)** US patent 6,049,208 issued to **Takekoshi et al.**, April 11th 2000 filed Nov. 17th 1995

Conclusion

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is (703) 305-0430. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

44. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (703) 305-4816. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3432 .

45. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.


TAF

June 20, 2002


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800